

KPI: Does It Still Matter? A Case Study of Tertiary Private Sector Colleges in Sabah

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ABSTRACT

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Key Performance Indicators (KPIs) have traditionally served as vital instruments for monitoring performance and guiding strategic planning in higher education. However, the higher education landscape in Sabah, particularly within the private tertiary sector, is undergoing rapid transformation, raising questions about the continued relevance of conventional KPI frameworks. This study aims to critically examine the relevance, application, and limitations of KPIs in private colleges across Sabah, with particular attention to how socio-economic diversity, geographical challenges, and evolving educational needs shape performance measurement. Using a qualitative approach, the study draws on perspectives from academic staff, administrators, and secondary policy literature to explore how current KPI practices influence institutional behavior and educational outcomes. The analysis reveals that while KPIs provide accountability and facilitate institutional comparisons, their overreliance on quantitative metrics often neglects equally important dimensions such as faculty innovation, student engagement, community impact, and graduate employability in local industries. The findings suggest that conventional KPI models do not fully reflect the realities of private tertiary education in Sabah, where institutions must balance financial sustainability with broader social and developmental roles. The study concludes by proposing a revised framework that integrates both quantitative and qualitative indicators to provide a more holistic and context-sensitive performance evaluation system. This reorientation not only enhances the relevance of KPIs in Sabah but also offers practical recommendations for policymakers and administrators seeking to reform performance measurement in private tertiary institutions.

Contribution/Originality: This study contributes to the higher education discourse by contextualizing the role of Key Performance Indicators (KPIs) within the under-researched setting of private tertiary colleges in Sabah, offering fresh insights into how performance metrics operate in a resource-constrained and region-specific environment.

1. Introduction

Key Performance Indicators (KPIs) have been widely recognized as critical instruments for measuring organizational performance across multiple sectors, including business, healthcare, and education. In higher education, KPIs function as strategic tools that allow institutions to assess effectiveness, monitor academic quality, and align outcomes with institutional goals (Cheng & Blackmore, 2021). For private tertiary institutions, particularly in developing regions, KPIs are often linked not only to academic accountability but also to financial viability, as these institutions rely heavily on tuition fees and market competitiveness (Nisar, 2015).

In Malaysia, the use of KPIs has been institutionalized through frameworks established by the Malaysian Qualifications Agency (MQA) and the Ministry of Higher Education, which emphasize indicators such as graduate employability, accreditation status, research productivity, and student satisfaction (Ministry of Higher Education Malaysia, 2020). While these benchmarks provide a standardized mechanism for evaluation, they have also been criticized for fostering a compliance-driven culture that may overshadow broader educational objectives, such as fostering creativity, community engagement, and lifelong learning (Shah, 2021).

The relevance of KPIs becomes especially critical in Sabah, where private tertiary colleges face unique challenges shaped by socio-economic diversity, geographical disparities, and limited access to resources compared to their counterparts in Peninsular Malaysia. Many students in Sabah come from rural and indigenous communities, where financial constraints and educational inequalities impact participation in higher education (Yusof & Jamian, 2020). Consequently, private institutions are under pressure to balance quality assurance with inclusivity, employability, and regional development needs. The rigid application of traditional KPIs may not adequately reflect these contextual realities.

Moreover, global shifts in higher education including the rapid digitalization of learning, changing student expectations, and evolving labour market demands, have raised questions about the continued relevance of conventional KPIs. The COVID-19 pandemic, for instance, accelerated the adoption of online and hybrid learning models, challenging institutions to rethink indicators of teaching effectiveness and student engagement (Pham & Nguyen, 2020). These changes suggest a need to move beyond narrow quantitative metrics toward performance evaluation systems that also capture qualitative dimensions such as innovation, adaptability, and community impact.

This paper seeks to address the research problem by critically examining whether KPIs still hold relevance for private tertiary institutions in Sabah. Specifically, it aims to explore the role of KPIs in shaping institutional behaviour, assess their impact on stakeholders such as administrators, faculty, and students, and evaluate their adaptability in a rapidly transforming educational landscape. By identifying gaps in

current KPI frameworks and proposing a more context-sensitive approach, this study contributes to the broader discourse on performance management in higher education and offers strategic recommendations for reforming KPI practices in Sabah's private tertiary sector.

2. Literature Review

2.1. The Role of KPIs in Tertiary Education

Key Performance Indicators (KPIs) play an increasingly important role in tertiary education by offering institutions a method for quantitatively assessing performance and aligning activities with strategic objectives. Typical KPIs in this sector include student enrollment figures, graduation and retention rates, research output, faculty qualifications, student-to-teacher ratios, and financial health. These indicators allow institutions to measure their success in achieving educational outcomes, ensuring operational efficiency, and maintaining quality standards. In private institutions, these metrics are particularly critical, as they directly impact areas such as accreditation, competitiveness, and funding from both private and public sources (Scott, 2020).

KPIs also promote transparency and accountability. Educational institutions must demonstrate their effectiveness not only to internal stakeholders, such as faculty and students, but also to external bodies, including accrediting agencies, potential employers, and funding organizations. For example, high employment outcomes for graduates serve as a KPI indicating the institution's ability to provide relevant, career-oriented education, which reassures students and parents that their investment in education will yield tangible returns. Similarly, research performance KPIs are often tied to funding opportunities and collaborations with external organizations (Aziz, 2018).

In the context of private education in Sabah, where competition among institutions is fierce, KPIs are essential for maintaining institutional credibility and sustainability. Many private colleges face pressure to balance student satisfaction with financial sustainability, all while delivering quality education. KPIs can help these institutions measure and track their performance over time, providing data-driven insights that support strategic decisions on curriculum design, student services, and faculty development. For instance, a KPI on student feedback might highlight the need for better academic support services, while metrics on graduation rates could indicate areas where the curriculum might need to be adjusted to improve student outcomes (Hanafiah & Yusof, 2019).

Moreover, KPIs related to graduate employability are particularly critical in Sabah, as local industries and employers increasingly demand graduates with specific skills that meet market needs. Educational institutions can use KPIs to ensure their programs remain relevant and aligned with industry trends. For example, the incorporation of industry-specific certifications or partnerships with local businesses can become a KPI, indicating the institution's efforts to improve student employability and address skills gaps in the region. KPIs thus offer a structured way for institutions to navigate challenges in a dynamic educational landscape and ensure they remain competitive while delivering value to students (Kamaruddin & Abdullah, 2020).

2.2. Challenges Faced by Private Colleges in Sabah

Private tertiary education institutions in Sabah operate within a complex and multifaceted environment, characterized by diverse academic offerings, varied student demographics, and a reliance on tuition fees as their primary source of revenue. Unlike public institutions, which often receive substantial government funding, private colleges in Sabah must balance their profit motives with the imperative to deliver quality education. This creates a tension between maintaining financial sustainability and ensuring that educational standards remain high. As a result, these institutions face unique challenges that can hinder their ability to compete and thrive in the educational landscape (Lim & Goh, 2020).

One of the primary challenges for private colleges in Sabah is the dependence on student retention, satisfaction, and employability. Since these institutions rely heavily on tuition fees, losing students to competing institutions or failing to attract new enrollees can severely impact their financial stability. Ensuring that students are satisfied with their educational experience and graduate with employable skills is critical, but meeting these expectations often requires substantial investment in student services, curriculum development, and faculty qualifications, resources that private institutions may struggle to afford (Rajagopal & Umi, 2018).

Moreover, private colleges in Sabah often face limited access to funding for research and development, particularly when compared to their public counterparts. This lack of financial support restricts their ability to invest in cutting-edge technologies, update academic programs, and conduct research that could enhance their reputations. For instance, while public universities may receive government grants for research, private colleges are typically excluded from these funding streams, forcing them to rely on tuition fees or partnerships with private organizations to finance their initiatives (Salleh & Ariffin, 2019).

Another significant challenge is the reliance on part-time or adjunct faculty, which is a common practice among private institutions due to cost-saving measures. While this allows colleges to offer a wider range of courses without incurring high costs for full-time staff, it often results in lower continuity and engagement with students. Part-time faculty may have limited availability outside of scheduled teaching hours, which can negatively affect student support and learning outcomes (Hashim, 2021).

In addition to these institutional challenges, the geographical location and socio-economic conditions of Sabah create further obstacles. Many students attending private colleges in Sabah come from rural areas and face financial constraints, making access to education a significant hurdle. These students may also have limited access to modern technologies such as reliable internet or advanced learning tools, which are increasingly vital in today's digital learning environments. The socio-economic disparities also mean that students from these backgrounds may struggle to compete on equal footing with their peers from more urbanized regions, both academically and in terms of employability (Mat Zain et al., 2020).

Furthermore, private colleges must constantly update their academic programs to meet changing industry demands. In a rapidly evolving global economy, institutions that fail to adapt their curriculum to incorporate emerging trends and skill requirements risk becoming obsolete. This is particularly challenging in a region like Sabah, where

industries such as tourism, agriculture, and small-scale manufacturing may not always align with global trends, requiring colleges to find a balance between local relevance and global competitiveness (Nor, 2021).

The socio-economic and geographical constraints of Sabah often mean that Key Performance Indicators (KPIs), while essential for measuring institutional success, may not fully reflect the challenges these institutions face. For instance, while KPIs focused on graduate employability or research output are important, they may not account for the realities of limited resources, technological gaps, and the financial hardships experienced by many students. Hence, private colleges in Sabah must tailor their KPIs to reflect both institutional goals and the unique conditions of their local environment (Azlan, 2019).

2.3. KPIs: Benefits and Limitations

Key Performance Indicators (KPIs) play an essential role in providing a structured framework for evaluating the performance of tertiary education institutions. In the context of private colleges, especially in Sabah, KPIs are critical in monitoring key operational aspects such as student outcomes, faculty performance, and financial sustainability. One of the main benefits of KPIs is that they provide clear, measurable benchmarks for evaluating institutional success. By setting specific goals such as graduation rates, research output, or student retention, KPIs enable institutions to track their progress over time, making it easier to identify areas for improvement and allocate resources effectively (Thomas, 2021). Additionally, KPIs offer data-driven insights that aid in decision-making, promote transparency, and foster accountability to stakeholders such as students, parents, employers, and accreditation bodies (Hazelkorn & Gibson, 2020).

Despite these advantages, KPIs also present limitations, particularly in the unique context of private colleges in Sabah. One of the key drawbacks is the overemphasis on quantitative measures, which can lead to a narrow interpretation of educational success. Traditional KPIs often focus on easily measurable outcomes, such as student enrollment or research publications, but they may neglect important qualitative factors like student engagement, critical thinking, and creativity. These qualitative aspects are critical for a holistic educational experience but are often overlooked in KPI-driven assessments (Usher & Medow, 2018).

In regions like Sabah, where private institutions serve students from diverse socio-economic backgrounds, rigid adherence to standard KPIs can be particularly problematic. Many students in Sabah come from rural areas with limited access to modern technology and financial resources, making it difficult for these institutions to compete on conventional measures like research output or high employability rates. Instead, private colleges often focus on community engagement and capacity building, which contribute to local workforce development but may not be adequately reflected in traditional KPIs (Mohamad et al., 2020).

For example, graduation rates or employability metrics, while important, may not fully capture the contributions of these institutions to regional development. Private colleges in Sabah often engage in programs that directly benefit the local community, such as vocational training or collaborations with local industries, which are crucial for regional growth but difficult to quantify through KPIs. This mismatch between KPI expectations

and the realities of these institutions can result in an undervaluation of their broader impact on society (Azlan, 2019).

Moreover, financial performance as a KPI poses its own set of challenges. While ensuring financial sustainability is important, an excessive focus on profitability can conflict with the educational mission of these institutions. In Sabah, where education is often seen as a pathway to social mobility, private colleges must strike a balance between maintaining financial health and providing accessible, high-quality education. Over-prioritizing financial KPIs, such as revenue generation or cost-efficiency, may lead institutions to cut corners in areas like faculty development, student support, or curriculum innovation, which could negatively impact educational outcomes (Ahmad & Zawawi, 2021).

In summary, while KPIs offer valuable benefits by providing clear benchmarks for performance and promoting accountability, they also have limitations, especially when used in isolation. For private colleges in Sabah, it is important to adopt a more holistic approach to KPIs, incorporating both quantitative and qualitative metrics that reflect the unique challenges and contributions of these institutions. By doing so, these colleges can ensure that they continue to fulfill their educational mission while contributing meaningfully to regional development.

2.4. The Changing Educational Landscape

The landscape of higher education is rapidly evolving due to the influence of digitalization, shifting student preferences, and a growing demand for more flexible education pathways. These changes are particularly relevant for private colleges in Sabah, which must navigate both local and global trends to remain competitive and sustainable. Traditional Key Performance Indicators (KPIs), such as enrollment numbers, graduation rates, or research output, are increasingly being questioned for their ability to fully capture the effectiveness of modern educational practices in this dynamic environment (Daniel, 2020).

One of the major shifts is the increasing importance of preparing students for both local and global job markets. As globalization accelerates, graduates from private institutions in Sabah are expected to possess not only the technical skills required for local industries but also soft skills like communication, teamwork, and problem-solving, which are essential for success in a globalized workforce (Tait, 2022). Additionally, digital literacy is becoming a critical competency as employers worldwide seek individuals who can navigate the digital economy. These skills, which include the ability to use technology effectively, adapt to new digital tools, and engage in lifelong learning, are often not well-reflected in traditional KPIs, which focus more on academic metrics rather than broader competencies (Tertiary Education Commission, 2021).

The COVID-19 pandemic further accelerated the transformation of higher education. Institutions across the world, including in Sabah, were forced to shift quickly to online learning and hybrid models, blending in-person and digital education. This shift posed new challenges for measuring institutional success through traditional KPIs, which may not be adequately equipped to assess the effectiveness of online or hybrid learning environments. For example, student engagement in virtual classrooms, digital resource utilization, and online student support services are important metrics that have become increasingly relevant but are not typically captured by conventional KPIs (Almarzooq et al., 2020).

Moreover, the pandemic highlighted the need for flexible education pathways, as students now expect learning experiences that accommodate different learning styles, life circumstances, and career goals. Private colleges in Sabah must now adapt to offer flexible programs that cater to non-traditional students, such as working adults or those with family responsibilities. In this context, the standard KPI measures of success, such as timely graduation, may not fully account for the diverse student journeys in this new educational landscape (Brown, 2021).

The integration of technology in education is another critical factor driving changes in how KPIs should be designed and interpreted. Online learning platforms, digital assessment tools, and virtual collaboration spaces have become essential components of modern education. As a result, institutions must now consider how well they are integrating technology into their curricula, how effectively students are engaging with these tools, and how faculty are adapting to new teaching methods (Sharma & Kumari, 2022). Traditional KPIs may need to be expanded or redefined to measure success in these areas, as relying solely on pre-pandemic metrics could overlook significant advancements in teaching and learning practices.

Therefore, the changing educational landscape demands a reevaluation of how KPIs are used to measure success in higher education. Private colleges in Sabah must adopt more holistic approaches to performance measurement, incorporating metrics that reflect the growing importance of digital skills, flexible learning, and global employability. This shift is crucial to ensure that these institutions not only meet the needs of today's students but also remain relevant in an increasingly competitive and interconnected world.

3. Methodology

This study adopts a qualitative multiple-case study design, deemed appropriate because the research aimed to explore experiences, meanings, and institutional practices related to Key Performance Indicators (KPIs), rather than to test hypotheses or establish statistical generalizations (Creswell & Poth, 2018; Yin, 2018). The case study approach enabled in-depth exploration of how KPIs were conceptualized, implemented, and adapted across different private tertiary institutions in Sabah, while also allowing for comparisons between institutions of varying sizes, disciplines, and geographical settings. The population consisted of three key stakeholder groups directly involved in KPI usage: administrators, faculty members, and students. The sample was drawn purposively from six private institutions that met the inclusion criteria of having operated for at least three years and having formal KPI reporting systems. A total of 32 participants were recruited, comprising eight administrators, twelve faculty members, and twelve students. The sample size was justified using the principle of information power, which considers study aim specificity, participant expertise, and triangulation (Malterud et al., 2016) and was further supported by evidence of thematic saturation when no new insights emerged from subsequent interviews (Guest et al., 2006).

To ensure variation, a maximum-variation purposive sampling strategy was employed, supplemented by criterion sampling to guarantee that only institutions actively applying KPI frameworks were included (Patton, 2015). Data were collected between March and June 2025 using semi-structured interviews and document analysis. Semi-structured interviews were chosen for their balance of consistency and flexibility, allowing participants to elaborate on their perspectives while maintaining comparability across cases (Kallio et al., 2016). Interviews were conducted face-to-face when feasible and

online (via Zoom or Google Meet) when travel or scheduling constraints applied, each lasting between 45 and 90 minutes. With participants' consent, interviews were audio-recorded and transcribed verbatim. Field notes were maintained to capture non-verbal cues, contextual factors, and researcher reflections. To triangulate the interviews, institutional documents such as KPI dashboards, quality manuals, accreditation reports, and annual reviews were also analysed, providing insight into the formal frameworks guiding performance measurement (Bowen, 2009).

The data analysis process followed reflexive thematic analysis (Braun & Clarke, 2006, 2021), supported by NVivo version 14 for data management. Open coding was first conducted to generate data-driven codes, followed by iterative development of a codebook, which was refined during consensus discussions between two researchers. Pattern coding was then applied to organize codes into broader themes, which were reviewed across stakeholder groups and institutional types. This cross-case synthesis approach enabled identification of both commonalities and divergences in KPI perceptions, revealing critical tensions such as balancing accountability with academic freedom, or financial imperatives with student-centred learning (Yin, 2018). The trustworthiness of findings was enhanced through triangulation, member reflections, negative case analysis, and maintaining an audit trail (Lincoln & Guba, 1985).

Ethical clearance for this study was granted by the The Ethics Committee for Research Involving Human Subjects Universiti Putra Malaysia. All participants provided informed consent prior to participation, and pseudonyms were used to protect confidentiality. Data were securely stored on encrypted drives and access was restricted to the research team. Participants were informed of their right to withdraw at any stage without penalty, ensuring compliance with standard ethical principles in qualitative research (Merriam & Tisdell, 2016).

4. Results

4.1. Analysis: The Evolving Relevance of KPIs in Private Tertiary Colleges

4.1.1. Performance Measurement vs. Educational Quality

Key Performance Indicators (KPIs) have become indispensable in private tertiary institutions, serving as structured tools for assessing institutional success across dimensions such as student enrolment, graduation rates, financial health, and operational efficiency. In the context of private colleges in Sabah, where revenue is closely tied to student numbers and retention, KPIs are often used to demonstrate institutional accountability and sustainability. However, while their utility in administrative decision-making is widely acknowledged, their dominance in institutional strategy has raised critical questions regarding their influence on educational quality.

Numerous scholars have highlighted the risk that KPIs, if narrowly defined, may lead institutions to favour performance metrics over substantive educational outcomes. Saeed and Asghar (2022) argue that, "When KPIs dominate educational discourse, the focus shifts from learning to compliance, from pedagogy to numbers" (p. 115). This sentiment resonates with observations in Sabah's private colleges, where academic staff often report feeling constrained by metric-driven expectations.

One informant, a senior lecturer at a private college in Kota Kinabalu, commented:

“We are constantly reminded to meet our department KPIs—pass rates, retention, and so on. But these don't always reflect the quality of learning in my classroom. Sometimes I feel like I'm teaching to meet a number, not to educate” (Participant 4).

This testimony underscores a critical tension between the quantitative nature of KPIs and the qualitative aspirations of higher education. Faculty are often compelled to modify assessment methods, streamline content, or avoid innovative yet untested teaching practices to ensure that students perform well according to institutional metrics. Another academic from a technical college in Sandakan remarked:

“There is an unspoken pressure to simplify assessments so that students pass. The management wants good numbers, and if your class has too many failures, you'll be asked to explain yourself” (Participant 9).

These insights reveal how over-reliance on KPIs can produce perverse incentives, where teaching is optimized for performance indicators rather than meaningful learning. As [Leiber et al. \(2018\)](#) emphasize, *“The validity of KPIs as indicators of educational quality depends largely on how they are interpreted and applied. A misalignment can undermine academic integrity and innovation.”* (p.56).

In such cases, the emphasis on metrics like dropout reduction or average grades may mask deeper issues, such as the lack of critical thinking skills, engagement with course content, or real-world readiness among graduates. This is particularly concerning in a region like Sabah, where higher education institutions are expected to contribute to both personal development and community capacity building.

Ultimately, private tertiary colleges must strive for a more balanced approach where KPIs are not discarded, but contextualized and complemented with qualitative indicators. These might include student reflective feedback, graduate impact in local communities, and peer-reviewed teaching innovations. As one informant noted:

“Why can't we have KPIs that recognize how well we engage our students or how we contribute to the community? It would motivate us more and reflect what we actually do.” (Participant 15)

These voices advocate for an expanded, context-sensitive understanding of performance that aligns with the educational mission of private colleges especially in underrepresented regions like Sabah. While KPIs remain necessary for ensuring institutional viability, they should be recalibrated to reflect not just numerical success but also the intellectual and social growth that defines quality higher education.

4.2. Student-Centered Metrics: A Growing Need?

The evolving expectations of today's students have highlighted a significant gap in how performance is measured in private tertiary institutions. Contemporary learners increasingly value flexibility, personalized learning pathways, and the acquisition of practical skills that align with current and future labor market demands ([Knight et al., 2020](#)). However, conventional Key Performance Indicators (KPIs) which tend to prioritize enrolment numbers, graduation rates, and aggregate academic performance,

rarely capture the full scope of student experiences or aspirations. This disconnection poses challenges for private colleges in Sabah, which must remain competitive while simultaneously meeting the diverse needs of their growing and changing student populations.

Although some institutions are beginning to adapt, many continue to operate within legacy KPI frameworks that undervalue qualitative, student-centered dimensions such as engagement, career readiness, and personal growth. These aspects, while more difficult to quantify, are crucial for both long-term institutional reputation and the holistic success of students. One academic administrator explained:

"We talk about graduate employability, but our KPIs still revolve around how many students passed or completed on time. There's very little room to evaluate if they're actually prepared for the workplace or if they're engaged in meaningful learning." (Participant 6).

This misalignment is particularly evident in the evaluation of newer educational innovations such as experiential learning, industry-based projects, and mentorship programs. Such practices often shape students' readiness for real-world challenges but remain poorly represented in institutional performance reports. As one faculty member from a hospitality program reflected:

"Our students go through internships and community-based tourism projects that change how they see their career. But none of that gets recorded in our KPIs—it's like it didn't happen" (Participant 11)

The rigidity of conventional KPI systems also limits the capacity of institutions to foster personalized education, a model that emphasizes student agency, flexible pacing, and learner-driven outcomes. This is particularly important in Sabah, where cohorts are socioeconomically diverse and many students juggle part-time employment or come from rural backgrounds. Under existing KPI frameworks, however, extended completion times are often penalized. One research informant shared:

"Some students need longer to complete their diploma because they work part-time or come from rural areas. But when that affects our completion rates, it looks bad on paper—even if we're supporting them properly." (Participant 19)

integrates qualitative and process-oriented indicators alongside traditional quantitative measures. Such a framework could include indicators of student satisfaction, confidence in acquired skills, digital literacy, employer feedback, and graduate outcomes tracked over time to reflect long-term impact rather than short-term benchmarks. [Brown and Harvey \(2023\)](#) emphasize that *"institutions that fail to evolve their KPIs in line with student-centric values risk becoming irrelevant in an education system increasingly shaped by personalization, technology, and employability expectations"* (p. 42). This concern resonates strongly within Sabah's private colleges, where the mismatch between legacy KPIs and evolving educational practices undermines both institutional effectiveness and student development.

As one senior program coordinator succinctly put it:

"We need KPIs that reflect what students value, not just what looks good in an annual report. Engagement, innovation, and employability shouldn't be afterthoughts—they should be the foundation." (Participant 23)

Ultimately, private tertiary institutions in Sabah must reimagine their KPI frameworks to better capture the entirety of the student journey—from enrolment and engagement through to graduate employability and lifelong learning. Recalibrating performance systems to reflect both numerical success and holistic student development will not only improve educational quality but also strengthen institutional resilience in a rapidly evolving higher education landscape.

4.3. Technological Innovation and KPI Adaptation

The rise of digital transformation in higher education has significantly reshaped how learning is delivered, accessed, and evaluated, particularly in private tertiary institutions. Traditional KPI frameworks largely designed for linear, face-to-face models of education, are increasingly insufficient in capturing the complexity of academic performance and student success in the digital era (Marr, 2021). The widespread adoption of learning management systems (LMS), hybrid teaching models, AI-driven assessment tools, and virtual student services introduces new dimensions of performance that cannot be adequately measured by conventional indicators such as classroom attendance, pass rates, or graduation timelines.

Faculty and administrators in Sabah's private colleges are increasingly recognizing this gap. As one Head of Department at a private institution in Kota Kinabalu stated:

"Our LMS (Learning Management System) shows how often students log in, what materials they engage with, and how quickly they complete tasks. But our institutional KPIs still only ask for pass rates and completion numbers. We're missing the bigger picture." (Participant 7)

This "bigger picture" includes critical indicators such as student digital engagement, technology adoption by faculty, and the integration of digital tools in pedagogical design. Without these adapted KPIs, institutions risk relying on outdated performance metrics that do not reflect modern learning realities. A senior lecturer involved in developing hybrid courses added:

"We spent months redesigning our curriculum for blended learning, integrating videos, simulations, and online forums. Yet, none of these innovations are recognized in our performance reviews because the KPIs haven't caught up." (Participant 14).

Such testimonies highlight a broader institutional struggle to align performance measurement with digital innovation. As Lynch et al. (2022) argue, "Agile institutions are those that not only adopt technology but evolve their measurement systems to assess its effectiveness and impact on student outcomes" (p. 211). Indeed, colleges that have modernized their KPI models to include real-time analytics, virtual participation rates, and digital literacy acquisition report stronger alignment between institutional goals and educational delivery.

For example, new-generation KPIs might track:

- Frequency and depth of student interaction on virtual platforms (forum contributions, feedback activity)
- Student satisfaction with online learning environments
- Completion rates of microcredentials or digital skills modules
- Faculty innovation in integrating EdTech tools into curriculum delivery

An IT officer from a Sabah-based private institution emphasized the missed opportunity:

“We have dashboards that show digital usage trends—how many students watch recorded lectures, how often they access resources. This data is powerful, but it’s not being translated into performance indicators yet.” (Participant 20).

This disconnect creates frustration and inefficiencies, particularly when technology-enabled learning substantially enhances institutional effectiveness but remains invisible within formal evaluation frameworks. Moreover, in rural areas of Sabah where internet access remains inconsistent, KPIs that track digital inclusion, and equity could serve as crucial indicators of accessibility and responsiveness to student needs.

As private tertiary colleges in Sabah continue to navigate the digital evolution, KPI systems must evolve in tandem. The failure to adapt may lead to institutional stagnation and a widening gap between educational innovation and performance assessment. A lecturer involved in virtual community engagement projects concluded:

“If KPIs don’t reflect how education is changing, they’ll stop being useful. We need indicators that move with us, not ones that hold us back.” (Participant 18).

In summary, embracing technologically adaptive KPIs is no longer optional; it is a necessity. Institutions that prioritize innovation in both delivery and measurement will be better positioned to thrive in a higher education landscape defined by agility, inclusivity, and student-centred digital learning.

5. Discussion

The findings of this study, combined with insights from existing scholarship, highlight the complexity of applying Key Performance Indicators (KPIs) within the context of private tertiary institutions in Sabah. While KPIs are intended to provide accountability and support strategic planning, the evidence suggests that current frameworks often fail to reflect the full scope of educational quality, innovation, and community relevance. This section discusses the main challenges and limitations of existing KPIs, explores holistic approaches that could better capture institutional effectiveness, and considers how these frameworks might be revisited to align with Sabah’s unique educational environment.

5.1. Challenges and Limitations of Current KPIs

5.1.1. Quantifying Intangibles: Soft Skills, Innovation, and Creativity

A significant limitation of current KPI systems lies in their inability to measure intangible yet critical outcomes such as creativity, adaptability, teamwork, and innovation. Traditional metrics such as grade point averages, graduation rates, and test scores

provide useful benchmarks for academic proficiency but overlook process-oriented skills that employers increasingly value (OECD, 2021; Soutar & Ridings, 2019). Several research participants noted that metric-driven evaluation discouraged experimentation in teaching, as innovative practices may not yield immediate quantifiable results. This echoes Murray and Nallaya's (2016) observation that KPIs often prioritize what is easy to measure rather than what is truly important for student development.

Employers, however, emphasize the need for graduates who can work collaboratively, think critically, and adapt to changing environments (Harkins, 2020). If institutions continue to reward only quantifiable achievements, they risk producing graduates who lack the broader competencies required in Sabah's service-oriented and innovation-driven economy. Alternative approaches—such as project-based assessments, capstone portfolios, and reflective evaluations—could provide richer insights into students' competencies (Jackson, 2019). Similarly, rubrics assessing creativity and problem-solving (Beghetto, 2019) offer ways to formalize evaluation without oversimplifying complex skills.

Another challenge identified in both the literature and institutional testimonies is the dominance of financial KPIs. In resource-constrained settings such as Sabah, private institutions rely heavily on enrolment-driven revenue, often prioritizing intake numbers and cost efficiency over educational quality (Ghaffar et al., 2022). Research participants described pressures to expand student numbers without parallel investments in infrastructure or teaching capacity, leading to overcrowded classrooms and staff fatigue. These concerns align with Altbach and de Wit's (2020) critique that excessive focus on financial indicators risks undermining institutional credibility in the long term.

KPIs tied to cost reduction can also discourage investment in academic innovation, research development, or faculty training—initiatives that are costly in the short term but vital for long-term competitiveness (Grewal et al., 2023). Such managerialism often erodes academic morale and reduces higher education to a transactional model (Marginson, 2018). To counter this, a balanced scorecard approach (Kaplan & Norton, 2004) that integrates both financial and non-financial KPIs could realign institutional priorities toward a more sustainable model.

Private colleges in Sabah also face increasing regulatory demands from bodies such as the Malaysian Qualifications Agency (MQA). These requirements, while crucial for quality assurance, often impose standardized KPIs that do not account for institutional diversity (Dill & Beerkens, 2020). Research informants highlighted the significant administrative burden of producing evidence and reports for audits, which can detract from innovation and teaching. This aligns with Santiago et al.'s (2008) concern that compliance-oriented KPI systems encourage a “checklist mentality” rather than continuous improvement.

Smaller institutions in particular struggle with reconciling national-level benchmarks with their regional missions, such as serving rural communities or promoting inclusivity (Ng & Tan, 2020). Marginson (2021) similarly cautions that rigid regulation can limit institutional autonomy and responsiveness. Streamlined, outcome-based, and mission-sensitive compliance frameworks (Clark, 2022) may help ensure that accountability supports rather than stifles institutional development.

5.2. Toward a More Holistic Approach

To address these challenges, many scholars advocate for holistic KPI frameworks that integrate qualitative indicators and technological innovations (Brown, 2021). The inclusion of student feedback, collected through surveys or focus groups, can provide nuanced insights into teaching quality and institutional responsiveness (Yorke, 2018). Faculty innovation, whether in pedagogy or research, should also be recognized as a KPI dimension, reinforcing adaptability and creativity in academic practice (Sharma & Kumari, 2022).

Community engagement provides another important metric, particularly in Sabah where institutions play a critical role in regional development. KPIs tracking service-learning, civic partnerships, and student volunteerism can highlight contributions to social capacity building (Tait, 2022). Integrating these elements with digital analytics offers further opportunities for adaptive KPI systems. For example, learning management systems can generate real-time indicators of student engagement, enabling timely interventions for at-risk learners (Daniel, 2020).

By combining financial stability with measures of teaching effectiveness, research productivity, and social responsibility, institutions can move toward a balanced evaluation system that reflects their multiple roles. Adaptive dashboards that consolidate financial and qualitative data (Tertiary Education Commission, 2021) exemplify this approach, providing a more comprehensive view of institutional performance.

5.3. Revisiting KPIs for Relevance in Sabah's Private Colleges

Sabah's private colleges operate within unique socio-economic and geographic contexts that differ from those in Peninsular Malaysia. Institutions must not only ensure academic quality but also address issues of access, inclusivity, and regional workforce needs. Traditional KPIs focusing on enrolment, graduation, and financial performance are necessary but insufficient. A revised framework must capture student experience, local employability, entrepreneurial outcomes, and resilience in underserved areas (Sharma & Kumari, 2022).

Proposed domains include:

1. Student satisfaction and experience—measured through perceptions of teaching quality, digital access, and inclusivity.
2. Community engagement and partnerships—tracking service-learning, civic collaboration, and regional outreach.
3. Graduate employability in local industries—particularly tourism, agriculture, aquaculture, and renewable energy (Brown, 2021).
4. Entrepreneurial and innovation output—capturing start-ups, microenterprises, and social initiatives driven by graduates (Tertiary Education Commission, 2021).

Flexibility must also be built into KPI interpretation. For example, extended completion rates may reflect socio-economic barriers rather than institutional failure, particularly for students from rural or economically disadvantaged backgrounds (Daniel, 2020). Long-term impact indicators, such as contributions to social mobility, sustainable development, and indigenous enterprise, should also be incorporated (Tait, 2022).

Such regionally responsive KPI systems would better reflect the contributions of private colleges in Sabah, strengthening their legitimacy among communities and policymakers. They would also enable institutions to strategically align resources with goals that matter most to their stakeholders, ensuring resilience and sustained relevance.

5.4. Synthesis and Implications

Taken together, the challenges of current KPIs, the need for holistic approaches, and the contextual realities of Sabah underscore the urgency of rethinking performance measurement in private higher education. The study suggests that while KPIs remain indispensable for accountability and governance, their design and application must evolve to capture qualitative outcomes, foster innovation, and align with local socio-economic priorities. For policymakers, this means streamlining compliance frameworks and encouraging mission-sensitive indicators. For institutional leaders, it implies balancing financial imperatives with student-centred, community-oriented, and innovation-driven measures. Ultimately, for private colleges in Sabah, a recalibrated KPI framework offers a pathway toward greater institutional resilience, credibility, and societal relevance in a rapidly transforming educational landscape.

6. Conclusion

The relevance of Key Performance Indicators (KPIs) in private tertiary education in Sabah is multifaceted. While KPIs are essential for evaluating institutional performance and ensuring accountability to stakeholders, their traditional forms often fail to capture the full scope of these institutions' contributions, particularly within the context of Sabah's unique socio-economic and geographic challenges. As the educational landscape continues to evolve driven by digital transformation, changing student expectations, and the demands of the local economy, it is crucial for private colleges in Sabah to reassess their KPIs.

To remain competitive and relevant, these institutions must adopt KPIs that are not only quantitative but also qualitative, reflecting broader goals such as student satisfaction, community engagement, and employability in key regional industries like tourism and agriculture. Additionally, KPIs must be flexible and context-sensitive, aligning with local realities while embracing the global shifts in education. By adopting a more holistic approach to performance measurement, private colleges in Sabah can achieve a more comprehensive view of educational success, ensuring they thrive in an increasingly dynamic and competitive environment.

Ethics Approval and Consent to Participate

This study was reviewed and approved by the The Ethics Committee for Research Involving Human Subjects Universiti Putra Malaysia. All participants were provided with an information sheet detailing the purpose, procedures, risks, and benefits of the study. Written informed consent was obtained from all participants prior to data collection. Participants were assured of confidentiality, anonymity, and their right to withdraw from the study at any stage without penalty.

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Conflict of Interest

The authors declare that there are no conflicts of interest with respect to the research, authorship, or publication of this article.

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